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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,185	01/02/2001	George Beshara Bendak	AMCC4540	1099

7590 12/28/2004  
Terrance A. Meader  
INCAPLAW  
1050 Rosecrans Street  
Suite k  
San Diego, CA 92106

EXAMINER

FAN, CHIEH M

ART UNIT PAPER NUMBER

2634

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/753,185

Applicant(s)

BENDAK ET AL.

Examiner

Chieh M Fan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7-11,21,22 and 31 is/are rejected.
- 7) ☒ Claim(s) 2-6,12-20 and 23-30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/02/01 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>01022004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the connection between the first receiver node 202 and the transmit monitor 132 as described in the specification on page 8. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 306 (see line 1 of page 12). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The disclosure is objected to because of the following informalities: "(the) system 200 a first relay 100" in line 22 of page 8 is not understood.

Appropriate correction is required.

***Claim Objections***

4. Claims 13-18, 30 and 31 are objected to because of the following informalities:

Regarding claims 13-18, "encoding the communications" in line 3 of claim 13 should be changed to --- encoding the decoded communications ---.

Regarding claim 30, "a control signal" in line 14 and in line 29 should be changed to --- the control signal --- since such limitation has been recited in line 7.

Regarding claim 30, "a control signal" in line 20 should be changed to --- the control signal --- since such limitation has been recited in line 7.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation "the decoded communications" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the first and second transmit paths" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 9-11, 21, 22 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anhorn (U.S. Patent No. 6,643,255) in view of Chiou (U.S. Patent No. 5,949,818).

Regarding claim 1, Anhorn teaches a communication relay device, a method for providing redundancy comprising (col. 1, lines 42-56): receiving communications on a first receive path and a second receive path (inputs from HUB1 and HUB3 in Fig. 4); monitoring the first and second receive paths for communication integrity (DET1 and DET2 in Fig. 4); and selecting a receive path in response to monitoring the first and second receive paths for communication integrity (S1 in Fig. 4).

Anhorn does not particularly teach that the relay device is implemented in an integrated circuit. However, it is well known in the art that a relay device or a repeater is implemented in an integrated circuit for at least the advantage of reducing circuit size. For example, Chiou teaches a repeater comprises an integrated circuit (col. 2, line 6). Therefore, it would have been obvious to a person of ordinary skill in the art at the time

the invention was made to implement the relay device of Anhorn in an integrated circuit so as to reduce the circuit size.

Regarding claim 9, Anhorn also teaches: selecting the first receive path; monitoring the first receive path for communication integrity; receive path; detecting communication integrity problems in the first and switching to the second receive path (col. 1, lines 45-55).

Regarding claim 10, Anhorn teaches a communication relay device, a method for providing redundancy (col. 1, lines 42-56) comprising: receiving communications from a first node (inputs from HUB1 and HUB3 in Fig. 4); monitoring the received communications for communication integrity (DET1 and DET2 in Fig. 4); and selecting a path from the first node in response to monitoring communication integrity (S1 in Fig. 4). Anhorn does not particularly teach that the relay device is implemented in an integrated circuit. However, it is well known in the art that a relay device or a repeater is implemented in an integrated circuit for at least the advantage of reducing circuit size. For example, Chiou teaches a repeater comprises an integrated circuit (col. 2, line 6). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the relay device of Anhorn in an integrated circuit so as to reduce the circuit size.

Regarding claim 11, Anhorn also teaches: transmitting the communications to a second node (outputs to HUB1 and HUB3 in Fig. 5); monitoring the transmitted communications for communication integrity (DET1 in Fig. 5); and selecting a path to the second node in response to monitoring communication integrity (S2 in Fig. 5).

Regarding claim 21, Anhorn teaches a relay device to provide a method for maintaining a high integrity communication path between network nodes (col. 1, lines 42-56), the method comprising: establishing a plurality of paths between a first node and a second node (inputs and outputs to HUB1 and HUB3 in Fig. 4); monitoring the integrity of communications on the plurality of paths (DET1 and DET2 in Fig. 4); and selecting the paths with the highest integrity (S1 in Fig. 4). Anhorn does not particularly teach that the relay device is implemented in an integrated circuit. However, it is well known in the art that a relay device or a repeater is implemented in an integrated circuit for at least the advantage of reducing circuit size. For example, Chiou teaches a repeater comprises an integrated circuit (col. 2, line 6). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the relay device of Anhorn in an integrated circuit so as to reduce the circuit size.

Regarding claim 22, Anhorn teaches a communication relay device for providing redundancy (col. 1, lines 42-56), the device comprising: a receive monitor (K1, K2, DET1, CTRL and DET2 in Fig. 4) having a first input (input to K1) connected to a first receive path and a second input (input to K2) connected to a second receive path, the receive monitor monitoring the integrity of communications on the first and second receive paths and supplying a control signal responsive to the communication integrity at a first output (output of CTRL), the receive monitor supplying the communications from the first receive path to a second output (output of K1) and communications from the second receive path to a third output (output of K2); and a receive switch (S1 in Fig.



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4) having a first input connected to the receive monitor second output, a second input connected to the receive monitor third output, and a third input connected to the receive monitor first output, and an output to supply communications from the selected input in response to the control signal. Anhorn does not particularly teach that the relay device is implemented in an integrated circuit. However, it is well known in the art that a relay device or a repeater is implemented in an integrated circuit for at least the advantage of reducing circuit size. For example, Chiou teaches a repeater comprises an integrated circuit (col. 2, line 6). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the relay device of Anhorn in an integrated circuit so as to reduce the circuit size.

Regarding claim 31, Anhorn teaches a system of communication relay devices for providing redundancy, the system comprising: a receive monitor (K1, K2, DET1, CTRL and DET2 in Fig. 4) having a first input (input to K1) connected to a first receive path and a second input (input to K2) connected to a second receive path, the receive monitor monitoring the integrity of communications on the first and second receive paths and supplying a control signal responsive to the communication integrity at a first output (output of CTRL), the receive monitor supplying the communications from the first receive path to a second output (output of K1) and communications from the second receive path to a third output (output of K2); and a receive switch (S1 in Fig. 4) having a first input connected to the receive monitor second output, a second input connected to the receive monitor third output, and a third input connected to the receive monitor first output, and an output to supply communications from the selected input in response to

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the control signal; a first transmitter node (HUB1) having an output connected to the receive monitor first input to transmit communications; a second transmitter node (HUB3) having an output connected to the receive monitor second input to transmit communications; and wherein the receive monitor supplies the control signal to select a receive switch input in response to monitoring communication integrity (DET1, DET2). Anhorn does not particularly teach that the relay device is implemented in an integrated circuit. However, it is well known in the art that a relay device or a repeater is implemented in an integrated circuit for at least the advantage of reducing circuit size. For example, Chiou teaches a repeater comprises an integrated circuit (col. 2, line 6). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the relay device of Anhorn in an integrated circuit so as to reduce the circuit size.

### ***Allowable Subject Matter***

9. Claims 2-6, 12-20, 23-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 30 would be allowable if rewritten to overcome the claim objections above.

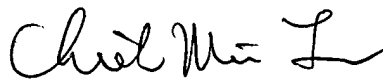
**Conclusion**

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Beasley et al. (U.S. Patent No. 5,924,022).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chieh M Fan whose telephone number is (571) 272-3042. The examiner can normally be reached on Monday-Friday 8:00AM-5:30PM, Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Chieh M Fan  
Primary Examiner  
Art Unit 2634

December 22, 2004